STATEMENT OF WORK
CONTRACT NO. EP-W-11-044

WA No. 03

1. TITLE: Acquiring and Processing Data for Energy Extraction Initiative

2. PERIOD OF PERFORMANCE: From Date of Issuance through December 31, 2012.

3. EPA Work Assignment Manager (WAM):

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4. BACKGROUND

EPA's new Energy Extraction National Enforcement Initiative (Initiative) requires universe information on land-based gas and oil extraction facilities that are potentially subject to EPA actions (permitting, inspections, and enforcement). Facilities subject to this Initiative include land-based oil and gas extraction wells, compressor stations, and gas plants. Inspectors and managers need a comprehensive database of oil and gas facilities in order to conduct queries and mapping for targeting and results reporting. This database also can help EPA Regions prepare work plans and conduct end-of-year reporting. This work assignment outlines the tasks required for maintaining and updating this universe database for the Initiative and its related Knowledge Base.

EPA's national data systems of record (AFS, ICIS-NPDES/PCS, RCRAInfo) do not contain all the information needed to support the Initiative. In particular, these data systems do not collect enough facility-specific information to provide EPA inspectors and managers with the necessary data to conduct proper targeting and reporting. This work assignment provides the tasks required for maintaining and updating a universe database, which will separately be used to conduct queries and mapping for targeting and results reporting. The initial creation of this

database was done under a separate work assignment [Contract #EP-W-09-033, WA #ETS-0-11(CE)].

This work assignment outlines the tasks for selecting data sources, purchasing data from commercial vendors, performing quality assurance checks, reviewing and transforming this data into useable formats, and documentation. The transformed oil and gas data will be used for EPA's "Knowledge Base," which is an online resource available only to Online Tracking Information System (OTIS) users (EPA and state staff) and is managed under a separate EPA contract.

5. PURPOSE AND OBJECTIVE

Under this work assignment the contractor will conduct quarterly updates to the "Energy Initiative Database" (database), which contains information on land-based facilities in the oil and gas extraction, distribution, and processing sectors. This database will be in a Microsoft Access® compatible format. With each quarterly data refresh the contractor will purchase and extract data from commercial data providers (e.g., HPDI, LLC and *Oil and Gas Journal*) and Federal data (e.g., Federal Energy Regulatory Commission (FERC), National Emissions Inventory). The contractor will also prepare a Quality Assurance Project Plan (QAPP) that describes the database development and refresh process (including quality assurance measures). The contractor will process the data on a quarterly basis with the quality assurance measures outlined in the QAPP. For each data refresh the contractor will deliver a short summary memorandum that outlines the dates and other major details for each data refresh (including any updates to the QAPP). These quarterly summary memoranda will also describe any significant changes observed in the data from the last refresh cycle. Finally, the contractor will develop a user guide on how inspectors might use and display the data in the database and conduct specialized queries for the Agency. This work assignment is estimated to require 465 hours of labor and the purchase of four months total of access to HPDI.

6. Scope of Work

Task 1 – Program Management

The contractor shall develop a work plan describing the necessary steps and estimated hours to complete each of the tasks included in this work assignment. The work plan shall also include a list of the key personnel to participate in the work assignment. The contractor shall also estimate other direct costs such as travel, computer cost, typing, etc.

The contractor shall provide electronic copies of the monthly progress reports to the EPA WAM and PO. Each progress report shall describe the technical work and expenditures for the same time period as the corresponding invoice. The reports shall list by task the amount of work completed and include a table of hours by personnel for each task. The reports also shall identify any problems or difficulties.

In addition to the monthly progress reports, the contractor shall prepare monthly and mid-monthly status summaries (in a Microsoft Excel compatible format) to the EPA WAM and EPA

PO. The EPA WAM will provide the template for these monthly and mid-monthly status summaries. The monthly and mid-monthly status reports shall list the following information by task: summaries of current and cumulative costs and LOE expended for the reporting period. The mid-monthly and monthly summaries of costs and expenditures LOE shall be provided prior to the progress report.

TASK 1 – DELIVERABLES

Milestone/Reporting Requirement	Schedule
Work Plan	• 25 days from issuance of work assignment
Progress Reports	• Monthly
Mid-Monthly Reports	• Mid-monthly and monthly

Task 2 – Quality Assurance

This task includes developing a Quality Assurance Project Plan (QAPP) that will document how quality assurance and quality control will be applied to the development of the database. The Office of Enforcement and Compliance Assurance (OECA) will use the QAPP to demonstrate compliance with EPA's quality system requirements set forth in EPA Order 5360.1 and EPA "Requirements for Quality Assurance Project Plans," EPA QAIG-5, December 2002. In particular, it is the policy of OECA that QA activities shall be conducted to assure environmental data generated, processed or used for its program requirements will be of known quality, and will achieve prescribed data quality objectives. Furthermore, the data will be adequate and sufficient for their intended use. The updated QAPP shall include:

- a description of how the energy initiative data will be generated, compiled, and organized by the contractor;
- a description of how the contractor will evaluate the energy initiative data for completeness, reasonableness, and comparability; verify that any calculations are correct; and test and evaluate the database performance;
- a description of the process for transferring the data to EPA or EPA contractors;
- documentation of select logic from the data sources, and pull/refresh dates;
- documentation of any known data limitations with the sources of data; and
- an appendix which will serve as the data element dictionary for the database.

In summary, the QAPP should clearly state: (1) the source of data, (2) how the contractor collects the data, (3) the frequency of data refresh, (4) data reformatting and processing (e.g., error corrections, unit conversions), and (5) any limitations or descriptive information that should be displayed to the EPA's Knowledge Base users.

TASK 2 – DELIVERABLES

Milestone/Reporting Requirement	Schedule
Quality Assurance Project Plan	• 4 weeks from issuance of work assignment
Revised Updated Quality Assurance Project Plan	• 2 weeks after receipt of comments from EPA

Task 3 – Database Refresh and Delivery

Under this task the contractor will purchase the needed universe data and conduct quarterly updates to the database. As noted above, for each quarterly data refresh the contractor will extract data from the relevant commercial and federal data providers. The contractor will use the QAPP created under Task 2, along with the procedures developed by the contractor under a previous work assignment, to conduct these quarterly data refreshes [Contract #EP-W-09-033, WA #ETS-0-11(CE)].

HPDI: States collect data on oil and gas extraction activities in order to collect royalties and taxes and manage their state resources. These functions are often performed by the state oil and gas conservation commission, which is usually not part of the state environmental agency. This data is not generally submitted to EPA. The mission of these state commissions is to foster, encourage and promote the development, production and utilization of their natural resources of oil and gas. The data kept by each commission is managed in separate databases and there is no national single standard for managing this type of data. HPDI has created a single national database on oil and gas extraction activities from these separate databases. The contractor also will obtain data from state oil and gas conservation commissions (e.g., Illinois, Indiana) when such data are not available through HPDI.

Oil and Gas Journal Worldwide Gas Processing Survey (O&GJ Survey): ERG will also purchase data from O&GJ to update the operator, location, and capacity of gas processing plants. O&GJ sends surveys to all oil and gas companies annually to obtain updated information on their gas processing plants. O&GJ publishes its survey in June every year, with capacities based on January 1 of that year (i.e., the January 1, 2010 capacity is published in June 2010). The contractor will also incorporate data from EPA and state staff that have information on gas processing plants that are not in the O&GJ Survey.

FERC: the contractor also will use FERC data to identify the operator, location, and capacity of natural gas compressor stations. These data include:

- Form 2: Annual Report of Major Natural Gas Companies; and
- Form 2-A: Annual Report of Non-Major Natural Gas Companies.

The contractor will also incorporate data from EPA and state staff that have information on natural gas compressor stations that are not in the FERC data.

Finally, ERG also will purchase or use additional data sources to allow for a more complete universe and for targeting of compressor station expansions, including:

- Oil and Gas Journal Worldwide Pipeline Construction Survey, which includes: company, type of project (e.g., crude, gas, compressor station, gas storage, etc.), status of the project (e.g., planning, engineering, construction, etc.), expected completion date, and project notes that may include capacity.
- EPA's National Emission Inventory (NEI) Database, which includes criteria and

hazardous air pollutants.

- State data (e.g., PA DEP data, which is summarized at http://www.marcellus-shale.us).

ERG will deliver the database to EPA on a quarterly schedule and provide technical support on integrating this data with the Knowledge Base. The terms of service for this purchased data will allow ERG to share the database with EPA and for EPA to share the database with its contractors and OTIS users.

TASK 3 – DELIVERABLES

Milestone/Reporting Requirement	Schedule
Energy Initiative Database ("Database") Refresh	• 90 days after work assignment issuance and quarterly thereafter (4 refreshes total over one year)
Support for deployment of the database on EPA's Knowledge Base	• At Written Technical Direction from the WAM

Task 4 – Database Refresh Documentation

With each quarterly data refresh the contractor will deliver a short summary memorandum (e.g., five to ten pages) that outlines the dates and other major details for each data refresh (including any updates to the QAPP). These quarterly summary memoranda will also describe any significant changes observed in the data from the last refresh cycle.

The contractor will develop a user guide on how inspectors might use and display the data in the database. This user guide will be written in a plain language format (see Attachment A) and include screen shots of example queries, data displays, and potential integration with free online tools (e.g., Google Maps).

Finally, the contractor will support the Agency in running specialized queries. The WAM will identify the search terms and the data fields for the output in a CSV file. For planning purposes, the contractor should estimate that there will be six such specialized queries.

TASK 4 – DELIVERABLES

Milestone/Reporting Requirement	Schedule
Quarterly Summary Data Refresh Memorandum	• 90 days after work assignment issuance and quarterly thereafter (4 total)
Database User Guide	• 120 days after work assignment issuance
Specialized Database Queries (6)	• At Written Technical Direction from the WAM

7. CONTRACT SOW REFERENCE

This Work Assignment will draw on the following sections of the Contract SOW:

- Task Area II.4 - Data Management: Data Exchange within EPA and Other Agencies
- Task Area II.5 - Data Management: Software Development/Programming Support
- Task Area II.6 - Other
- Task Area III 2.a - Targeting and Data Analysis: CWA NPDES

8. ANTICIPATED TRAVEL REQUIREMENTS

EPA does not anticipate the need for non-local travel by contractor employees and/or subcontractors to support the scope of this work assignment.

9. ADDITIONAL CONTROL REQUIREMENTS

a. Office direct costs. Office direct costs (ODCs) for copying, postage/courier, supplies, computer usage, and graphics are allowed. No other ODCs are allowable as a direct charge to this delivery order without the prior written approval of the Contracting Officer.

b. Recordkeeping. Upon issuance of written technical direction, the Contractor shall submit for inspection all work in progress at any time under this work assignment. The Contractor shall develop and maintain files supporting each task.

c. Resolution of Identified Problems. The contractor shall contact the Contracting Officer (CO) and/or the Project Officer (PO) by telephone to discuss any problems that may adversely affect the work on this Work Assignment. Within five (5) calendar days the contractor shall follow the phone call with a brief written explanation of the problem, including any actions already taken, and/or recommended solutions to correct the problem. Written explanation shall be made available to the CO and the PO.

d. Notification of Spending. The Contractor shall notify the CO and EPA WAM in writing when 85% of the authorized work assignment LOE/labor hours have been expended.

e. Contractor Identification. To avoid any perception that contractor personnel are EPA employees, the contractor shall assure that contractor personnel are clearly identified as independent contractors of EPA when attending meetings with outside parties or visiting field sites. When speaking with the public the contractor should refer all interpretations of policy to the EPA WAM.

f. Limitation of Contractor Activities. The contractor will submit drafts of all deliverables to the EPA WAM for review prior to submission of the final product. The contractor will incorporate all EPA WAM comments into all final deliverables, unless otherwise agreed upon by the EPA WAM. The contractor will adhere to all applicable EPA management control procedures as implemented by the EPA CO, PO, and WAM.

g. Deliverable Formatting and Terminology. Throughout this Work Assignment, the contractor shall provide draft and final reports to EPA in electronic and hard copy formats. The EPA WAM and contractor will use the terminology in this work assignment to improve the

deliverable review process. See Attachment A. The contractor shall discuss the computer file formats to be used for word processing, spreadsheet, database and graphics with the EPA WAM prior to file preparation.

h. Deliverables. Major technical reports shall be subject to internal contractor peer review by an expert(s) not directly involved in the mainstream Work Assignment tasks. Deliverables will be prepared with proper adherence to EPA style and format requirements. See Attachment A.

i. Deadlines. For the purpose of developing this work plan, the contractor shall assume the deliverable due dates provided with each task. The EPA WAM/PO also will use written technical direction to change a deadline if management requires any particular deliverable earlier than specified in the following tasks. For any deliverable, no deadline will extend beyond the WA period of performance.

j. Organizational Conflict of Interest. The Contractor shall warrant that, to the best of the Contractor's knowledge and belief, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as defined in FAR Subpart 9.5, or that the contractor has disclosed all such relevant information. See contract clause 1552.209-71 Organization of Conflict of Interest.

k. Notification of Conflicts of Interest Regarding Personnel. The Contractor shall immediately notify the Project Officer and the Contracting Officer of (1) any actual or potential personal conflict of interest with regard to any of its employees working on or having access to information regarding this contract, or (2) any such conflicts concerning subcontractor employees or consultants working on or having access to information regarding the contract, when such conflicts have been reported to the Contractor. A personal conflict of interest is defined as a relationship of an employee, subcontractor employee, or consultant with an entity that may impair the objectivity of the employee, subcontractor employee, or consultant in performing the contract work. See Section H.4, contract clause EPAAR 1552.209-73 Notification of Conflict of Interest.

l. Enforcement Sensitive Information. This work assignment will not likely involve enforcement sensitive information. In the event that EPA does require the contractor to handled enforcement sensitive information, the contractor recognizes that this information should not be released to the public without EPA approval. Enforcement sensitive refers to records or information compiled for law enforcement purposes (whether administrative, civil or criminal), the disclosure of which could reasonably be expected to interfere with the enforcement action. It is imperative that all contractor personnel, including but not limited to, subcontractor and consultant personnel assigned to work on this contract and/or WA, or with access to materials developed pursuant to such efforts, understand that this information is confidential and any disclosure or misuse of the information may result in prosecution to the fullest extend of the law. All contractor personnel are expected to exercise due diligence in safeguarding, handling or disposing of any such information.

m. Handling of Confidential Business Information (CBI). EPA does not anticipate the need for the contractor to handle CBI for this work assignment, as all of the data in ICIS-NPDES and PCS are not CBI.

Attachment A – Improving the Deliverable Review Process

This Work Assignment involves the production of several types of written products ranging from deliberative memos to published reports. The general workflow is for EPA to provide written guidance to the contractor on the development of these products. The contractor then develops the initial versions of these products. EPA reviews and revises these documents prior to finalization. Several iterations of development, review, and revision may be necessary prior to product finalization. The EPA WAM and contractor will use the following terminology and clarify the expectations for each deliverable via written direction.

Clarification of Terminology

One way for EPA to anticipate the amount of EPA review necessary for a contractor deliverable would be to better define the phase or version of the document in the development, review, and revision process. The following terms will be used in describing the phase or version of the contractor's deliverables: Concept Memo, First Draft, and Draft Final. These phases are described below.

Concept Memo – A document used to present ideas for discussion. The writing style is not necessarily formal and may be as simple as presenting a list of ideas or options. The concept memo is considered an internal deliberative document and may be the result of prior topic discussions (and brainstorming meetings) between EPA, the contractor, and other stakeholders. EPA does not expect this type of document to have received senior technical review or the input of a technical editor. However, the concept memo is expected to have received some level of review (*e.g.*, an internal contractor "peer-to-peer" review) prior to delivery to EPA. Based on past experience, a concept memo is most useful as a tool to guide EPA in determining the desired audience and structure of a future "public-ready" work product.

First Draft – An early version of a document that will ultimately be "public-ready". The document may still be an internally deliberative product. The writing style is clear but formal. The audience and structure (such as outline or questions to be answered) have been previously defined by and reviewed with EPA. This version is considered appropriate for senior technical review (STR), particularly to confirm that the document answers the questions it is meant to address and that the document is appropriate for the intended audience. It is not unreasonable to expect that STR results in further conversations with EPA. EPA's review of the deliverable is intended to confirm that ideas and concepts are presented as intended.

Draft Final – A "public-ready" document that is ready for distribution to an internal audience (*e.g.*, EPA workgroup) or external audience (*e.g.*, EPA's Docket). The contractor will confirm with EPA the intended audience for this document. Additionally, this version of the document incorporates EPA's comments on the previous versions of the document. Prior to submission to EPA the document will be reviewed by a technical editor to ensure consistency with the Executive Memorandum on 1 June 1998 directing the Executive Departments and Agencies to write in plain language. Specifically, the technical editor will revise the document to address the following questions.[1]

[1] These questions were modified from the following EPA's website: http://www.epa.gov/plainlanguage/faqs.htm

- ❖ Is the document organized to serve the needs of readers?
- ❖ Does the document explain how it is organized and how to use it?
- ❖ Does the document start with items of most interest to reader?
- ❖ Are the chapter, table, and figure titles descriptive and helpful to readers in finding specific information more easily?
- ❖ Are complicated topics summarized before describing all the details?
- ❖ Does the document use the active voice?
- ❖ Does the document include only information readers actually need?
- ❖ Does the document use easy-to-read design features like lists, tables, graphics, and "white space"?
- ❖ Are citations for references clearly identified and does the reader know how to gain access to these references?

Additionally, the contractor will get approval from EPA on any other style sheets for Draft Final documents.

Clarification of EPA's Expectations for Deliverables

The deliverable review process can be improved if EPA clearly states its expectations for when STR should take place and the purpose of the STR. Specifically, EPA should identify for the contractor the "big-picture" objectives and questions for the STR to address. The STR should be able to comment on the clarity of the document and whether the document met the objectives and answered the questions identified by EPA. The contactor will share with EPA a summary of the STR.